

Methanol

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 03/04/2017

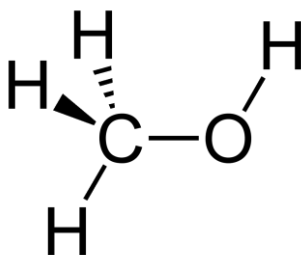
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
Substance name : Methanol
EC Index-No. : 603-001-00-X
EC-No. : 200-659-6
CAS-No. : 67-56-1
Type of product : Pure substance
Formula : CH₄O
Chemical structure :



Synonyms : 420A reagent #5 / acetone alcohol / A13-00409 / alcohol C1 / alcohol, methyl / carbinol / caswell No 552 / coat-B1400 / colonial spirit / colonial spirits / columbian spirit / columbian spirits / EPA pesticide chemical code 053801 / eureka products criosine disinfectant / eureka products, criosine / freers elm arrester / green wood spirits / holzin / HYDRANAL-standard-methanol / ideal concentrated wood preservative / manhattan spirits / Methanol / methanol chromasol / methyl alcohol / methyl hydrate / methyl hydroxide / methylen / methylol / monohydroxymethane / pyroligneous spirit / pyroxylic spirit / RCRA waste number U154 / standard wood spirits / surflo-B17 / wilbur-ellis smut-guard / wood alcohol / wood naphtha / wood spirit / X-cide 402 industrial bactericide

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Solvent

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

ISOLAB Laborgeräte GmbH
Am Dillhof 2 - 63863 Eschau / GERMANY
Tel: + 49 93 74 / 978 55-0
Fax: +49 93 74 / 978 55-29
prodsafe@isolab.de

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Germany	Giftnotruf der Charité CBF, Haus VIII (Wirtschaftgebäude), UG	Hindenburgdamm 30 12203 Berlin	+49 30 19240	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 H225
Acute Tox. 3 (Inhalation) H331
Acute Tox. 3 (Dermal) H311
Acute Tox. 3 (Oral) H301
STOT SE 1 H370

Full text of hazard classes and H-statements : see section 16

Specific concentration limits:

(3 =<C < 10) STOT SE 2, H371
(C >= 10) STOT SE 1, H370

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Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS06

GHS08

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour

H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled.

H370 - Causes damage to organs

Precautionary statements (CLP) :

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P240 - Ground/bond container and receiving equipment.

P280 - Wear protective gloves, eye protection, face protection, protective clothing

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P308 + P310 - IF exposed or concerned: immediately call a POISON CENTER or doctor/physician.

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	%
Methanol	(CAS-No.) 67-56-1 (EC-No.) 200-659-6 (EC Index-No.) 603-001-00-X	100

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Never give alcohol to drink.

First-aid measures after inhalation

: Remove the victim into fresh air. Immediately consult a doctor/medical service.

First-aid measures after skin contact

: Wash immediately with lots of water. Soap may be used. Do not apply (chemical) neutralizing agents. Remove clothing before washing. Consult a doctor/medical service.

First-aid measures after eye contact

: Rinse with water. Take victim to an ophthalmologist if irritation persists.

First-aid measures after ingestion

: Rinse mouth with water. Give nothing to drink. Do not induce vomiting. Immediately consult a doctor/medical service. Call Poison Information Centre (www.big.be/antigif.htm). Ingestion of large quantities: immediately to hospital. Take the container/vomit to the doctor/hospital. Doctor: administration of chemical antidote. Doctor: gastric lavage.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation

: Slight irritation. EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Symptoms similar to those listed under ingestion.

Symptoms/effects after skin contact

: Symptoms similar to those listed under ingestion. Slight irritation.

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Symptoms/effects after eye contact	: Redness of the eye tissue. Lacrimation.
Symptoms/effects after ingestion	: Nausea. Vomiting. AFTER ABSORPTION OF HIGH QUANTITIES: FOLLOWING SYMPTOMS MAY APPEAR LATER: Change in the haemogramme/blood composition. Headache. Feeling of weakness. Abdominal pain. Muscular pain. Central nervous system depression. Dizziness. Mental confusion. Drunkenness. Coordination disorders. Disturbed motor response. Disturbances of consciousness. Visual disturbances. Blindness. Respiratory difficulties. Cramps/uncontrolled muscular contractions.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Skin rash/inflammation. Headache. Disturbed tactile sensibility. Visual disturbances. Sleeplessness. Gastrointestinal complaints. Cardiac and blood circulation effects.

4.3. Indication of any immediate medical attention and special treatment needed

Hospitalize at once. Until victim can be cared for by specialized staff:

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Preferably: alcohol resistant foam. Water spray. BC powder. Carbon dioxide.
Unsuitable extinguishing media	: Solid water jet ineffective as extinguishing medium.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: DIRECT FIRE HAZARD. Highly flammable. Gas/vapour flammable with air within explosion limits. INDIRECT FIRE HAZARD. May be ignited by sparks.
Explosion hazard	: DIRECT EXPLOSION HAZARD. Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD. may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard".

5.3. Advice for firefighters

Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Gas-tight suit. See "Material-Handling" to select protective clothing.
Emergency procedures	: Keep upwind. Mark the danger area. Consider evacuation. Close doors and windows of adjacent premises. Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Keep containers closed. Wash contaminated clothes.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

For containment	: Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute combustible/toxic gases/vapours with water spray. Take account of toxic/corrosive precipitation water. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills.
Methods for cleaning up	: Take up liquid spill into a non combustible material e.g.: sand, earth, vermiculite slaked lime or soda ash. Scoop absorbed substance into closing containers. See "Material-handling" for suitable container materials. Carefully collect the spill/leftovers. Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Handle uncleaned empty containers as full ones. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Do not use compressed air for pumping over. Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Observe very strict hygiene - avoid contact. Keep container tightly closed. Measure the concentration in the air regularly. Work under local exhaust/ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Information on mixed storage : KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents. (strong) acids. (strong) bases. halogens. amines. water/moisture.
Storage area : Store in a cool area. Keep out of direct sunlight. Store in a dry area. Keep container in a well-ventilated place. Fireproof storeroom. Keep locked up. Provide for a tub to collect spills. Provide the tank with earthing. Unauthorized persons are not admitted. Aboveground. Meet the legal requirements.
Special rules on packaging : SPECIAL REQUIREMENTS: closing. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials : SUITABLE MATERIAL: steel. stainless steel. iron. glass. MATERIAL TO AVOID: lead. aluminium. zinc. polyethylene. PVC.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Methanol (67-56-1)		
EU	Local name	Methanol
EU	IOELV TWA (mg/m ³)	260 mg/m ³
EU	IOELV TWA (ppm)	200 ppm
EU	Notes	skin
Austria	Local name	Methanol
Austria	MAK (mg/m ³)	260 mg/m ³
Austria	MAK (ppm)	200 ppm
Austria	MAK Short time value (mg/m ³)	1040 mg/m ³
Austria	MAK Short time value (ppm)	800 ppm
Austria	Remark (AT)	H
Belgium	Local name	Alcool méthylique # Methanol
Belgium	Limit value (mg/m ³)	266 mg/m ³
Belgium	Limit value (ppm)	200 ppm
Belgium	Short time value (mg/m ³)	333 mg/m ³
Belgium	Short time value (ppm)	250 ppm
Belgium	Remark (BE)	D: La mention D signifie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l'exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l'agent dans l'air. # De vermelding D betekent dat de opname van het agens via de huid, de slijmvliezen of de ogen een belangrijk deel van de totale blootstelling vormt. Deze opname kan het gevolg zijn van zowel direct contact als zijn aanwezigheid in de lucht.
Bulgaria	Local name	Метилов алкохол
Bulgaria	OEL TWA (mg/m ³)	260 mg/m ³
Bulgaria	OEL TWA (ppm)	200 ppm
Bulgaria	Notes	Кожа (възможна е значителна резорбция чрез кожата); • (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност)
Croatia	Local name	Metanol
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	260 mg/m ³

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Methanol (67-56-1)		
Croatia	GVI (granična vrijednost izloženosti) (ppm)	200 ppm
Croatia	Naznake (HR)	K (Skin): (naznaka da tvar može štetno djelovati kroz kožu); EU** (naznaka da se radi o tvarima za koje su utvrđene indikativne granične vrijednosti izloženosti prema Direktivi 2006/15/ EC (druga lista)); F (lako zapaljivo); T (otrovno)
Czech Republic	Local name	Methanol
Czech Republic	Expoziční limity (PEL) (mg/m ³)	250 mg/m ³
Czech Republic	Expoziční limity (PEL) (ppm)	189 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m ³)	1000 mg/m ³
Czech Republic	Expoziční limity (NPK-P) (ppm)	750 ppm
Czech Republic	Remark (CZ)	D
Denmark	Local name	Methanol (Methylalkohol)
Denmark	Grænseværdie (langvarig) (mg/m ³)	260 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	200 ppm
Denmark	Anmærkninger (DK)	E (betyder, at stoffet har en EF-grænseværdi); H (betyder, at stoffet kan optages gennem huden)
Estonia	Local name	Metanool (metüülalkohol)
Estonia	OEL TWA (mg/m ³)	250 mg/m ³
Estonia	OEL TWA (ppm)	200 ppm
Estonia	OEL STEL (mg/m ³)	350 mg/m ³
Finland	Local name	Metanoli
Finland	HTP-arvo (8h) (mg/m ³)	270 mg/m ³
Finland	HTP-arvo (8h) (ppm)	200 ppm
Finland	HTP-arvo (15 min)	330 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	250 ppm
Finland	Huomautus (FI)	iho
France	Local name	Alcool méthylique (méthanol)
France	VME (mg/m ³)	260 mg/m ³
France	VME (ppm)	200 ppm
France	VLE (mg/m ³)	1300 mg/m ³
France	VLE (ppm)	1000 ppm
France	Note (FR)	VME réglementaires contraignantes; la VLE n'est pas réglementaire et provient d'une circulaire du ministère chargé du travail; risque de pénétration percutanée
Germany	Local name	Methanol
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	270 mg/m ³
Germany	TRGS 900 Occupational exposure limit value (ppm)	200 ppm
Germany	Remark (TRGS 900)	DFG,EU,H,Y
Greece	OEL TWA (mg/m ³)	260 mg/m ³
Greece	OEL TWA (ppm)	200 ppm
Greece	OEL STEL (mg/m ³)	325 mg/m ³
Greece	OEL STEL (ppm)	250 ppm
Hungary	Local name	METIL-ALKOHOL
Hungary	AK-érték	260 mg/m ³
Hungary	Megjegyzések (HU)	b, i; II.1.
Ireland	Local name	Methanol
Ireland	OEL (8 hours ref) (mg/m ³)	260 mg/m ³
Ireland	OEL (8 hours ref) (ppm)	200 ppm
Ireland	Notes (IE)	Sk, IOELV

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Methanol (67-56-1)		
Italy	Local name	Metanolo
Italy	OEL TWA (mg/m ³)	260 mg/m ³
Italy	OEL TWA (ppm)	200 ppm
Latvia	Local name	Metanols (metilspirts, karbinols)
Latvia	OEL TWA (mg/m ³)	260 mg/m ³
Latvia	OEL TWA (ppm)	200 ppm
Lithuania	Local name	Metanolis (metilo alkoholis)
Lithuania	IPRV (mg/m ³)	260 mg/m ³
Lithuania	IPRV (ppm)	200 ppm
Lithuania	Remark (LT)	O (medžiaga į organizmą gali prasiskverbti pro nepažeistą odą)
Luxembourg	Local name	Méthanol
Luxembourg	OEL TWA (mg/m ³)	260 mg/m ³
Luxembourg	OEL TWA (ppm)	200 ppm
Malta	Local name	Methanol
Malta	OEL TWA (mg/m ³)	260 mg/m ³
Malta	OEL TWA (ppm)	200 ppm
Netherlands	Local name	Methanol
Netherlands	Grenswaarde TGG 8H (mg/m ³)	133 mg/m ³
Netherlands	Grenswaarde TGG 8H (ppm)	100 ppm (Methanol; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Remark (MAC)	H (Huidopname) Stoffen die relatief gemakkelijk door de huid kunnen worden opgenomen, hetgeen een substantiële bijdrage kan betekenen aan de totale inwendige blootstelling, hebben in de lijst een Haanduiding. Bij deze stoffen moeten naast maatregelen tegen inademing ook adequate maatregelen ter voorkoming van huidcontact worden genomen.
Poland	Local name	Metanol (metylowy alkohol)
Poland	NDS (mg/m ³)	100 mg/m ³
Poland	NDSch (mg/m ³)	300 mg/m ³
Portugal	Local name	Metanol (Álcool metílico)
Portugal	OEL TWA (ppm)	200 ppm
Portugal	OEL STEL (ppm)	250 ppm
Romania	Local name	Alcool metilic
Romania	OEL TWA (mg/m ³)	260 mg/m ³
Romania	OEL TWA (ppm)	200 ppm
Romania	OEL STEL (ppm)	5 ppm
Slovakia	Local name	Metylalkohol (metanol)
Slovakia	NPHV (priemerná) (mg/m ³)	260 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	200 ppm
Slovakia	Upozornenie (SK)	K - znamená, že faktor môže byť ľahko absorbovaný kožou
Slovenia	Local name	metanol (metilalkohol)
Slovenia	OEL TWA (mg/m ³)	260 mg/m ³
Slovenia	OEL TWA (ppm)	200 ppm
Spain	Local name	Metanol (Alcohol metílico)
Spain	VLA-ED (mg/m ³)	266 mg/m ³
Spain	VLA-ED (ppm)	200 ppm

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Spain	Notes	Vía dérmica (Indica que, en las exposiciones a esta sustancia, la aportación por la vía cutánea puede resultar significativa para el contenido corporal total si no se adoptan medidas para prevenir la absorción. En estas situaciones, es aconsejable la utilización del control biológico para poder cuantificar la cantidad global absorbida del contaminante. Para más información véase el Apartado 5 de este documento), VLB® (Agente químico que tiene Valor Límite Biológico específico en este documento), VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran al menos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembros disponen de un tiempo fijado en dichas directivas para su transposición a los valores límites de cada país miembro. Una vez adoptados, estos valores tienen la misma validez que el resto de los valores adoptados por el país).
Sweden	Local name	Metanol
Sweden	nivågränsvärde (NVG) (mg/m ³)	250 mg/m ³
Sweden	nivågränsvärde (NVG) (ppm)	200 ppm
Sweden	kortidsvärde (KTV) (mg/m ³)	350 mg/m ³
Sweden	kortidsvärde (KTV) (ppm)	250 ppm
Sweden	Anmärkning (SE)	H (Ämnet kan lätt upptas genom huden. Det föreskrivna gränsvärdet bedöms ge tillräckligt skydd endast under förutsättning att huden är skyddad mot exponering för ämnet ifråga); V (Vägledande kortidsgränsvärde ska användas som ett rekommenderat högsta värde som inte bör överskridas)
United Kingdom	Local name	Methanol
United Kingdom	WEL TWA (mg/m ³)	266 mg/m ³
United Kingdom	WEL TWA (ppm)	200 ppm
United Kingdom	WEL STEL (mg/m ³)	333 mg/m ³
United Kingdom	WEL STEL (ppm)	250 ppm
United Kingdom	Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Russian Federation	Local name	Метанол+
Russian Federation	OEL Ceiling (mg/m ³)	15 mg/m ³
Russian Federation	OEL TWA (mg/m ³)	5 mg/m ³
Russian Federation	Remark (RU)	3 класс опасности - опасное; п (пары и/или газы); + (соединения, при работе с которыми требуется специальная защита кожи и глаз; символ проставлен вслед за наименованием вещества)
Norway	Local name	Metanol
Norway	Grenseverdier (AN) (mg/m ³)	130 mg/m ³
Norway	Grenseverdier (AN) (ppm)	100 ppm
Norway	Merknader (NO)	H (Kjemikalier som kan tas opp gjennom huden); E (EU har en veiledende grenseverdi for stoffet)
Switzerland	Local name	Methanol
Switzerland	VME (mg/m ³)	260 mg/m ³ 260 mg/m ³
Switzerland	VME (ppm)	200 ppm 200 ppm
Switzerland	VLE (mg/m ³)	1040 mg/m ³ 1040 mg/m ³

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Methanol (67-56-1)		
Switzerland	VLE (ppm)	800 ppm 800 ppm
Switzerland	Remark (CH)	H B SS _c - ZNS, Sehen - INRS, NIOSH
Turkey	Local name	Metanol
Turkey	OEL TWA (mg/m ³)	260 mg/m ³
Turkey	OEL TWA (ppm)	200 ppm
Turkey	Comments	Deri
Australia	Local name	Methyl alcohol
Australia	TWA (mg/m ³)	262 mg/m ³ Synonym (Methanol)
Australia	TWA (ppm)	200 ppm Synonym (Methanol)
Australia	STEL (mg/m ³)	328 mg/m ³ Synonym (Methanol)
Australia	STEL (ppm)	250 ppm Synonym (Methanol)
Australia	Remark (AU)	Sk - Absorption through the skin may be a significant source of exposure.
USA - ACGIH	Local name	Methanol
USA - ACGIH	ACGIH TWA (ppm)	200 ppm
USA - ACGIH	ACGIH STEL (ppm)	250 ppm
USA - ACGIH	Remark (ACGIH)	Headache; eye dam; dizziness; nausea
USA - OSHA	Local name	Methyl alcohol
USA - OSHA	OSHA PEL (TWA) (mg/m ³)	260 mg/m ³
USA - OSHA	OSHA PEL (TWA) (ppm)	200 ppm

8.2. Exposure controls

Materials for protective clothing:

GIVE EXCELLENT RESISTANCE: No data available. GIVE GOOD RESISTANCE: polyethylene/ethylenevinylalcohol. styrene-butadiene rubber. viton. GIVE LESS RESISTANCE: chloroprene rubber. chlorinated polyethylene. natural rubber. nitrile rubber/PVC. GIVE POOR RESISTANCE: leather. neoprene. nitrile rubber. polyethylene. PVA. PVC. polyurethane

Hand protection:

Gloves

Eye protection:

Safety glasses

Skin and body protection:

Head/neck protection. Protective clothing

Respiratory protection:

Wear gas mask with filter type A if conc. in air > exposure limit. High vapour/gas concentration: self-contained respirator

Device	Filter type	Condition	Standard
Gas mask	Type A - High-boiling (>65 °C) organic compounds	If conc. in air > exposure limit	



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Molecular mass	: 32.04 g/mol
Colour	: Colourless.
Odour	: Characteristic odour. Mild odour. Pleasant odour. Alcohol odour. Commercial/unpurified substance: Irritating/pungent odour.

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Odour threshold	: 2000 - 8800 ppm 2620 - 11528 mg/m ³
pH	: No data available
Relative evaporation rate (butylacetate=1)	: 4.1
Relative evaporation rate (ether=1)	: 6.3
Melting point	: -98 °C
Freezing point	: No data available
Boiling point	: 65 °C (1013 hPa)
Flash point	: 52 °F (11 °C)
Critical temperature	: 240 °C
Auto-ignition temperature	: 455 °C (1013 hPa)
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 128 hPa (20 °C)
Vapour pressure at 50 °C	: 552 hPa (50 °C)
Critical pressure	: 79547 hPa
Relative vapour density at 20 °C	: 1.1
Relative density	: 0.79-0.80, 20 °C
Relative density of saturated gas/air mixture	: 1
Density	: 792 kg/m ³ (790 - 792 kg/m ³ ; 20 °C)
Solubility	: Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in chloroform. Water: >= 100 g/100ml (20 °C) Ethanol: Complete Ether: Complete Acetone: Complete
Log Pow	: -0.77 (Experimental value; Other)
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 0.544 - 0.59 mPa·s (25 °C)
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 5.5 - 50 % (V)

9.2. Other information

Minimum ignition energy	: 0.14 mJ
Saturation concentration	: 166 g/m ³
VOC content	: 100 %
Other properties	: Clear. Hygroscopic. Volatile. Substance has neutral reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity

On heating: release of toxic/corrosive/combustible gases/vapours (formaldehyde). Upon combustion: CO and CO₂ are formed. Violent to explosive reaction with (some) metal powders and with (strong) oxidizers. Violent exothermic reaction with (some) acids and with (some) halogens compounds.

10.2. Chemical stability

Hygroscopic.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Inhalation: Toxic if inhaled. Dermal: Toxic in contact with skin. Oral: Toxic if swallowed.

Methanol (67-56-1)	
LD50 oral rat	5630 mg/kg
LD50 dermal rabbit	10000 mg/kg

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Causes damage to organs.
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008. Not classified as dangerous for the environment according to the criteria of Directive 67/548/EEC.
Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5/l.
Ecology - water : Not harmful to fishes (LC50(96h) >1000 mg/l). Not harmful to invertebrates (Daphnia) (EC50 (48h) > 1000 mg/l). Not harmful to algae (EC50 >1000 mg/l). Slightly harmful to bacteria (EC50: 100 - 1000 mg/l). Inhibition of activated sludge.

Methanol (67-56-1)	
LC50 fish 1	15400 mg/l (LC50; EPA 660/3 - 75/009; 96 h; Lepomis macrochirus; Flow-through system; Fresh water; Experimental value)
LC50 fish 2	10800 mg/l (LC50; 96 h; Salmo gairdneri)
EC50 Daphnia 1	> 10000 mg/l (EC50; DIN 38412-11; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)

12.2. Persistence and degradability

Methanol (67-56-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.
Biochemical oxygen demand (BOD)	0.6 - 1.12 g O ₂ /g substance
Chemical oxygen demand (COD)	1.42 g O ₂ /g substance
ThOD	1.5 g O ₂ /g substance
BOD (% of ThOD)	0.8 (Literature study)

12.3. Bioaccumulative potential

Methanol (67-56-1)	
BCF fish 1	< 10 (BCF; 72 h; Leuciscus idus)
Log Pow	-0.77 (Experimental value; Other)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

Methanol (67-56-1)	
Surface tension	0.023 N/m (20 °C)
Log Koc	Koc,PCKOCWIN v1.66; 1; Calculated value

12.5. Results of PBT and vPvB assessment

No additional information available

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12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Incinerate under surveillance with energy recovery. Do not discharge into drains or the environment. Obtain the consent of pollution control authorities before discharging to wastewater treatment plants.

Additional information : LWCA (the Netherlands): KGA category 06. Hazardous waste according to Directive 2008/98/EC.

European List of Waste (LoW) code : 07 01 04* - other organic solvents, washing liquids and mother liquors

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
1230	1230	1230	1230	1230
14.2. UN proper shipping name				
METHANOL	METHANOL	Methanol	METHANOL	METHANOL
Transport document description				
UN 1230 METHANOL, 3 (6.1), II, (D/E)	UN 1230 METHANOL, 3 (6.1), II (12°C c.c.)	UN 1230 Methanol, 3 (6.1), II	UN 1230 METHANOL, 3 (6.1), II	UN 1230 METHANOL, 3 (6.1), II
14.3. Transport hazard class(es)				
3 (6.1)	3 (6.1)	3 (6.1)	3 (6.1)	3 (6.1)
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : FT1
 Special provisions (ADR) : 279
 Limited quantities (ADR) : 11
 Excepted quantities (ADR) : E2
 Packing instructions (ADR) : P001, IBC02
 Mixed packing provisions (ADR) : MP19
 Portable tank and bulk container instructions (ADR) : T7
 Portable tank and bulk container special provisions (ADR) : TP2
 Tank code (ADR) : L4BH
 Tank special provisions (ADR) : TU15
 Vehicle for tank carriage : FL
 Transport category (ADR) : 2
 Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28

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Special provisions for carriage - Operation (ADR) : S2, S19

Hazard identification number (Kemler No.) : 336

Orange plates :

336

1230

Tunnel restriction code (ADR) : D/E

- Transport by sea

Transport regulations (IMDG) : Subject

Special provisions (IMDG) : 279

Limited quantities (IMDG) : 1 L

Excepted quantities (IMDG) : E2

Packing instructions (IMDG) : P001

IBC packing instructions (IMDG) : IBC02

Tank instructions (IMDG) : T7

Tank special provisions (IMDG) : TP2

EmS-No. (Fire) : F-E

EmS-No. (Spillage) : S-D

Stowage category (IMDG) : B

Stowage and handling (IMDG) : SW2

Flash point (IMDG) : 12°C c.c.

Properties and observations (IMDG) : Colourless, volatile liquid. Flashpoint: 12°C c.c. Explosive limits: 6% to 36.5% Miscible with water. Toxic if swallowed; may cause blindness. Avoid skin contact.

MFAG-No : 131

- Air transport

Transport regulations (IATA) : Subject to the provisions

PCA Excepted quantities (IATA) : E2

PCA Limited quantities (IATA) : Y341

PCA limited quantity max net quantity (IATA) : 1L

PCA packing instructions (IATA) : 352

PCA max net quantity (IATA) : 1L

CAO packing instructions (IATA) : 364

CAO max net quantity (IATA) : 60L

Special provisions (IATA) : A113

ERG code (IATA) : 3L

- Inland waterway transport

Classification code (ADN) : FT1

Special provisions (ADN) : 279, 802

Limited quantities (ADN) : 1 L

Excepted quantities (ADN) : E2

Carriage permitted (ADN) : T

Equipment required (ADN) : PP, EP, EX, TOX, A

Ventilation (ADN) : VE01, VE02

Number of blue cones/lights (ADN) : 2

- Rail transport

Transport regulations (RID) : Subject

Classification code (RID) : FT1

Special provisions (RID) : 279

Limited quantities (RID) : 1L

Excepted quantities (RID) : E2

Packing instructions (RID) : P001, IBC02

Mixed packing provisions (RID) : MP19

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Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special provisions (RID)	: TP2
Tank codes for RID tanks (RID)	: L4BH
Special provisions for RID tanks (RID)	: TU15
Transport category (RID)	: 2
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW28
Colis express (express parcels) (RID)	: CE7
Hazard identification number (RID)	: 336

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Methanol is not on the REACH Candidate List

Methanol is not on the REACH Annex XIV List

VOC content : 100 %

15.1.2. National regulations

Germany

VwVwS Annex reference : Water hazard class (WGK) 1, low hazard to waters (Classification according to VwVwS, Annex 1 or 2; ID No. 145)

WGK remark : Classification water polluting in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 2)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : Methanol is listed

Denmark

Class for fire hazard : Class I-1

Store unit : 1 liter

Classification remarks : F <Flam. Liq. 2>; Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms:

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ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
EC50	Median effective concentration
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Full text of H- and EUH-statements:	
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Flam. Liq. 2	Flammable liquids, Category 2
STOT SE 1	Specific target organ toxicity — single exposure, Category 1
H225	Highly flammable liquid and vapour
H301	Toxic if swallowed
H311	Toxic in contact with skin
H331	Toxic if inhaled
H370	Causes damage to organs

SDS ISOLAB

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product